



# MATERIAL SAFETY DATA SHEET #2307

Page 1 of 4

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**SUPERSEDES:** 5/9/01

## I. PRODUCT IDENTIFICATION

**PRODUCT NAME:** LESCO Talstar® Plus Fertilizer; Middleton Talstar Plus Fertilizer – 0.03%, 0.069%, 0.073%, 0.096%

**Chemical Family:** Pyrethroid Pesticide

**Chemical Name/Synonyms:** FMC 54800; (2-methyl[1,1'-biphenyl]-3-yl)methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-2,2-dimethylcyclopropanecarboxylate; IUPAC: 2-methylbiphenyl-3-ylmethyl (Z)-(1RS)-cis-3-(2-chloro-3,3,3-trifluoroprop-1-enyl)-2,2-dimethylcyclopropanecarboxylate

## II. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	%(by/wt.)	CAS #	PEL/TLV
Bifenthrin	0.03 – 0.096	82657-04-3	None
Formulated with one or more of the following ingredients. Check specific product label.			
Urea	0 – 98	57-13-6	10 mg/M <sup>3</sup> (dust) 5 mg/M <sup>3</sup> (resp)
Potassium Chloride	0 – 95	7447-40-7	10 mg/M <sup>3</sup>
Potassium Sulfate	0 – 95	7778-80-5	10 mg/M <sup>3</sup>
Monoammonium Phosphate	0 – 95	7722-76-1	15 mg/M <sup>3</sup> (dust) 5 mg/M <sup>3</sup> TLV
Diammonium Phosphate	0 – 95	7783-28-0	15 mg/M <sup>3</sup> (dust) 5 mg/M <sup>3</sup> (resp)
Ammonium Sulfate	0 – 95	7783-20-2	15 mg/M <sup>3</sup> (dust)
Calcium Carbonate	0 – 95	471-34-1	Not Determined
Sulfur	0 – 20	7704-34-9	5 ppm (SO <sub>2</sub> )
Iron (Ferric) Oxide	0 – 10	1309-37-1	15 mg/M <sup>3</sup> (dust)
Iron (Ferrous) Sulfate	0 – 10	7720-78-1	15 mg/M <sup>3</sup> (dust)
Manganese Oxide	0 – 10	1317-35-7	15 mg/M <sup>3</sup> (dust)
Magnesium Sulfate	0 – 10	7487-88-9	15 mg/M <sup>3</sup> (dust)

## III. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Primary Route(s) of Entry: Eyes, Skin, Inhalation, Ingestion

**POTENTIAL HEALTH EFFECTS:** Effects from overexposure result from either swallowing or coming into contact with the skin or eyes. Symptoms of overexposure include lacrimation, tremors and convulsions. Contact with bifenthrin may occasionally produce skin sensations such as rashes, numbing, burning or tingling. These skin sensations are reversible and usually subside within 12 hours.

**EYE:** Mildly irritating

**SKIN:** Mildly irritating

**INHALATION:** No data

**INGESTION:** Ingestion of large amounts of fertilizer may cause gastrointestinal disorder, nausea, vomiting and/or diarrhea. Ingestion of large amounts of bifenthrin by laboratory animals produces signs of toxicity including convulsions, tremors, and bloody nasal discharge.

**MEDICAL CONDITIONS AGGRAVATED:** None presently known

**POTENTIAL ENVIRONMENTAL HAZARDS:** Highly toxic to fish and aquatic organisms. Keep out of drains and watercourses.

## IV. FIRST AID MEASURES

**EYES:** Flush with large amounts of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.

**SKIN:** Remove contaminated clothing. Wash area of contact thoroughly with soap and water. Get medical attention if irritation persists.

**INHALATION:** If symptoms develop, remove person from source of exposure to fresh air. If respiratory symptoms persist, get medical attention.

**INGESTION:** Drink plenty of water. Never give anything by mouth to an unconscious person. If any discomfort persists, obtain medical attention.

**NOTES TO MEDICAL DOCTOR:** This product is expected to have low oral, dermal and inhalation toxicity. It is mildly to the skin and eyes. Reversible skin sensations (paresthesia) may occur and ordinary skin salves have been found useful in reducing discomfort. Contains aromatic hydrocarbons that can produce a severe pneumonitis if aspirated during vomiting. Consideration should be given to gastric lavage with an endotracheal tube in place. Treatment is otherwise controlled by removal of exposure followed by symptomatic and supportive care.

### V. FIRE FIGHTING MEASURES

**Flash Point (Method Used):** Not Applicable

**Lower Explosion Limits:** Not Applicable

**NFPA/HMIS Rating:** Health: 1

**EXTINGUISHING MEDIA:** ☒ Foam  
☐ Water Spray

**Auto Ignition Temperature:** Not Applicable

**Upper Explosion Limits:** Not Applicable

**Fire:** 1

**Reactivity:** 0

☐ Alcohol Foam ☒ Dry Chemical  
☐ Other ☒ CO<sub>2</sub>

**EXPLOSION HAZARDS:** Slightly combustible. This material may support combustion at elevated temperatures.

**FIRE FIGHTING PROCEDURES:** Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke, gases or vapors generated.

**HAZARDOUS COMBUSTION PRODUCTS:** If heated to decomposition, may give off ammonia and formaldehyde, as well as oxides of sulfur, manganese, magnesium, iron, potassium and phosphorus. Urea can yield cyanuric acid or biuret upon heating.

### VI. ACCIDENTAL RELEASE MEASURES

**RELEASE NOTES:** If material is spilled, isolate and post spill area. Wear protective clothing and personal protective equipment as noted in Section 8. Keep unprotected persons and animals out of the area. Keep material out of lakes, streams, ponds and sewer drains. Large spills should be covered to prevent dispersal. For dry material, use a wet sweeping compound or water to prevent the formation of dust. If water is used, prevent runoff or dispersion of excess liquid by diking and absorbing with a non-combustible absorbent such as clay, sand or soil. Vacuum, shovel or pump all waste material, including absorbent, into a drum and label contents for disposal. To clean and neutralize spill area, tools and equipment, wash with a suitable solution of caustic or soda ash, and an appropriate alcohol (i.e. methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution. Absorb, as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in Section 13.

### VII. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Store in a cool, dry, well-ventilated area. Do not use or store near heat, open flame or hot surfaces. Store in original containers only. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

**OTHER PRECAUTIONS:** Keep out of reach of children.

### VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Use local exhaust at all process locations where vapor or mist may be emitted. Ventilate all transport vehicles prior to unloading.

**PERSONAL PROTECTION EQUIPMENT:**

**EYES AND FACE:** For splash, mist or spray exposure, wear chemical protective goggles or a face shield.

**RESPIRATORY:** For splash, mist or spray exposure, wear, as a minimum, a properly fitted half-face or full-face NIOSH/MSHA air purifying respirator which is approved for pesticides. Respirator use and selection must be based on airborne concentrations.

**GLOVES:** Chemical protective gloves (i.e. nitrile). Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

**PROTECTIVE CLOTHING:** Depending upon concentrations encountered, wear coveralls or long-sleeved uniform and head covering. For larger exposures as in the case of spills, wear full body cover barrier suit, such as a PVC suit. Leather items, such as shoes, belts and watchbands that become contaminated should be removed and destroyed. Separately launder all work clothing before reuse

**WORK HYGENIC PRACTICES:** Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking, or using tobacco. Shower at the end of the workday.

**COMMENTS:** Personal protective recommendations for mixing or applying this product are prescribed on the product label. Information stated above provides useful additional guidance for individuals whose use or handling of this product is not guided by the product label.

### IX. PHYSICAL AND CHEMICAL PROPERTIES

**BOILING POINT:** Not Applicable  
**MELTING POINT:** Not Applicable  
**VAPOR DENSITY (air = 1):** Not Applicable  
**ODOR:** Earthy, slightly pungent  
**APPEARANCE:** Multi-colored granules  
**pH:** 7 – 8

**SPECIFIC GRAVITY:** 1  
**EVAPORATION RATE:** Not Applicable  
**VAPOR PRESSURE:** Not Applicable  
**SOLUBILITY IN WATER:** Not Determined  
**PERCENT VOLATILE:** Not Determined  
**BULK DENSITY (lbs./cu ft):** 55 - 62

### X. STABILITY AND REACTIVITY

**CONDITIONS TO AVOID:** Excessive heat and fire

**STABILITY:** Stable

**POLYMERIZATION:** Will not occur

**INCOMPATIBLE MATERIALS:** Strong acids, caustic compounds, humid-wet conditions

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide, hydrogen chloride and hydrogen fluoride. If heated to decomposition, may give off ammonia and formaldehyde, as well as oxides of sulfur, magnesium, iron, potassium and phosphorus. Urea can yield cyanuric acid or biuret upon heating.

### XI. TOXICOLOGICAL INFORMATION

**EYE EFFECTS:** Mildly irritating

**SKIN EFFECTS:** Mildly irritating

**DERMAL LC<sub>50</sub>:** (Rat) >2000 mg/kg

**ORAL LD<sub>50</sub>:** (Rat) Bifenthrin: (for Technical, not formulated product) 53.4 mg/kg; Fertilizer: >10,000 mg/kg

**INHALATION LC<sub>50</sub>:** No Data Available

**SENSITIZATION:** (Guinea Pig) Bifenthrin: Non-sensitizing

**ACUTE EFFECTS FROM OVEREXPOSURE:** This product is expected to have low oral, dermal and inhalation toxicity. It is expected to be mildly irritating to the skin and eyes. Ingestion of large amounts of the fertilizer may cause gastrointestinal disorder, nausea, vomiting and/or diarrhea. Large doses of bifenthrin ingested by laboratory animals produce signs of toxicity including convulsions, tremors, and bloody nasal discharge. Bifenthrin does not cause acute delayed neurotoxicity. Experience to date indicated contact with bifenthrin may occasion skin sensations such as rashes, numbing, burning, or tingling. These sensations are reversible and usually subside within 12 hours.

**CHRONIC EFFECTS FROM OVEREXPOSURE:** No data available for the formulation. In studies with laboratory animals, bifenthrin did not cause reproductive toxicity or teratogenicity. Tremors were associated with repeated exposure of laboratory animals to bifenthrin. In lifetime feeding studies conducted with rodents, a slight increase in the incidence of urinary bladder tumors at the highest dose in male mice was considered to be an equivocal response, not evidence of a clear compound-related effect. The overall absence of genotoxicity has been demonstrated in mutagenicity tests with bifenthrin.

**CARCINOGENICITY:**

**IARC:** Not Listed

**OSHA:** Not Listed



# MATERIAL SAFETY DATA SHEET #2307

Page 4 of 4

NTP: Not Listed

OTHER: EPA has classified bifenthrin as Class C,  
possible human carcinogen

## XII. ECOLOGICAL INFORMATION

**ENVIRONMENTAL DATA:** No data available for the formulation. Bifenthrin has moderate stability in the soil under aerobic conditions (half-life range from 65 – 125 days depending on soil type) and is stable at a wide range of pH values. Bifenthrin has a high Log Pow (>6.0), a high affinity for organic matter, and is not mobile in soil. Therefore, there is little potential for movement into ground water. There is the potential for bifenthrin to bioconcentrate (BCF = 11,750).

**ECOTOXICOLOGICAL INFORMATION:** No data available for the formulation. Bifenthrin is highly toxic to fish and aquatic arthropods and LC50 values range from 0.0038 to 17.8ug/L. In general, the aquatic arthropods are the most sensitive species. Care should be taken to avoid contamination of the aquatic environment. Bifenthrin had no effect on mollusks at its limit of water solubility. Bifenthrin is only slightly toxic to both waterfowl and upland game birds (LD50 values range from 1,800 mg/kg to >2,150 mg/kg).

## XIII. DISPOSAL CONSIDERATIONS

**DISPOSAL METHODS:** Open dumping or burning of this material or its packaging is prohibited. If spilled material cannot be disposed of by use according to label instructions, an acceptable method of disposal is to incinerate in accordance with local, state and national environmental laws, rules, standards and regulations. However, because acceptable methods of disposal may vary by location and regulatory requirements may change, the appropriate agencies should be contacted prior to disposal.

## XIV. TRANSPORTATION INFORMATION:

**DOT Transportation:** Not Regulated  
**Proper Shipping Name:** Not Applicable  
**Hazard Class:** Not Applicable  
**U.S. Surface Freight Class:** Fertilizing  
compound mixed with insecticide  
**Reportable Quantity (RQ):** Not Applicable

**ID NO.:** Not Applicable  
**Marine Pollution #1:** Not Listed  
**HM 181 Shipping Name:** Not Regulated

## XV. REGULATORY INFORMATION – UNITED STATES

### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

Y Immediate (Acute Health)

N Delayed (Chronic Health)

N Fire

N Sudden Release of Pressure

N Reactivity

**SEC 302:** Not Applicable

**SEC 304:** Not Applicable

**SEC 313:** Bifenthrin (#82657-04-3)

**CERCLA RQ:** Not Applicable

**CAA RQ:** Not Applicable

**EPA Registration No.:** 279-3201-10404, 279-3216-10404, 279-3227-10404, 279-3239-10404

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